

System Operations

Traffic Flow Management in the National Airspace System....and some First Impressions on Weather since crossing over from the National Weather Service

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Federal Aviation
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System Operations Mission

- **To balance Air Traffic demand with system capacity to ensure the maximum efficient utilization of the National Airspace System (NAS)**



System Operations Mission

In Addition.....

- **Deliver the value and high quality Air Traffic services that our customers want**
- **Provide safe, secure, cost effective Air Traffic services that our owners expect, now and into the future**
- **Create a professional workplace for our employees to excel and be innovative**
- **Be accountable for our performance in providing Air Traffic services with clear and specific goals linked to our customers, owners, and employees**



Organizational Structure

- **Traffic Management is a function in all Air Route Traffic Control Centers (ARTCC), selected terminal facilities and the Air Traffic Control System Command Center (ATCSCC)**
- **Traffic management personnel are air traffic controllers who analyze the demand on the system and implement initiatives that are relayed to En-route and Terminal Controllers**
- **In general, for traffic management issues, Tower personnel work through the TRACON, who work through overlying ARTCC; ARTCC personnel coordinates with the ATCSCC who has final approval authority for all national traffic management initiatives**



Traffic Management Overview

- **Traffic management is the craft of managing the flow of air traffic in the NAS based on capacity and demand**
- **A “Systems Approach” considers the impact of individual actions on the whole**
 - Traffic Management personnel consider who or what may be impacted and focus on a coordinated effort to ensure equity in the delivery of air traffic services
 - Collaborative Decision Making (CDM) activities with system stakeholders (ATC, airlines, general aviation) where consensus building is the goal
 - Requires stakeholders to look at costs and benefit to the system and not to one specific part



Traffic Management Planning Every Day

- **FAA personnel at the ATCSCC, ARTCCs, selected terminals and NAS customers collaboratively develop a plan for the management of the NAS**
 - ATCSCC hosts a planning teleconference every two hours to identify constraints to the NAS and the team members develop an “Operations Plan” that explains the constraints and also how they will be managed



Traffic Management Planning Every Day

- **Weather Information used in traffic management decisions**
 - CWSU consult
 - CCFP (CDM product)
 - TAFs
 - Airline input
 - ATCSCC Weather Desk consult
 - Other



First Impressions Since Crossing Over from NWS to FAA

- **Weather primary reason for delay in NAS and biggest concern for Traffic Flow Managers**
 - Weather discussed more than what you here forecasters discuss in a WFO environment
- **Golden Triangle: Chicago-New York-Atlanta most important from national perspective**
- **Every day the ATCSCC assesses how well previous day was executed**
 - Performance of Traffic Management Initiatives (TMIs)
- **TFM decisions require “specialized level” weather information**
 - Example: Airport Arrival Rates very sensitive to changes in weather where general TAF criteria does not provide justice



First Impressions Since Crossing Over from NWS to FAA

- **Incredible QA function to orchestrate daily assessments of TMI's--yet weather evaluation generally not included**
- **Surface winds nearly an every day issue for NY Metro airports**
- **Vertical wind profiles and compression issues for busiest terminal areas**
- **VFR weather at ATL yet pilots cannot maintain visual on final**



First Impressions Since Crossing Over from NWS to FAA

- **Very limited integration of weather information into TFM decision support tools**



First Impressions Since Crossing Over from NWS to FAA

- **Weather enterprise has ability to assist now**
 - NowGen meets NextGen
 - Weather integrated into decision support tools
 - Weather QA
 - Site Specific TAF criteria
 - No surprises for compression issues, slant-range visibility

